



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/798,226

03/10/2004

Stephen M. Lewis

14263.2USU1

3484

23552

7590

05/26/2006

MERCHANT & GOULD PC

P.O. BOX 2903

MINNEAPOLIS, MN 55402-0903

EXAMINER

SRIVASTAVA, KAILASH C

ART UNIT

PAPER NUMBER

1655

DATE MAILED: 05/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,226

Applicant(s)

LEWIS ET AL.

Examiner

Dr. Kailash C. Srivastava

Art Unit

1655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' petition filed 02 February 2006 to make instant application special under 37 C.F.R. § 1.102(c) or in the alternative under 37 C.F.R. § 1.102(e) (2) (i) and supported with a statement under 37 C.F.R. § 1.102 along with appropriate fee is acknowledged.
2. In view of the decision on the petition under the provisions of 37 C.F.R. 1.102(c) and M.P.E.P. § 708.02; part VI, granted 13 March 2006 action on merits commensurate with said decision on petition follows.
3. Note that the correct Art Unit location of your application under prosecution at the United States Patent and Trademark Office (i.e., USPTO) is 1655. To aid in correlating any papers for this application (i.e., USSN 11/077,969), all further correspondence regarding this application should be directed to Art Unit 1655.
4. Your application under prosecution at the USPTO is assigned to Dr. Kailash C. Srivastava, in Art Unit 1655. To aid in correlating any papers for this application (i.e., USSN 11/077,969), all further correspondence regarding this application should be directed to Examiner Kailash C. Srivastava in Art Unit 1655.
5. To ensure that all papers filed in a response remain together and for expedient communication to a response /amendment filed to an Office Action, Examiner will very much appreciate that in response to this Office Action, applicants label the header at each page of said response with application Serial number, filing date, applicants' name and Attorney's Docket number. This practice immensely minimizes the papers lost during transaction/transmission and facilitates examination.

Claims Status

6. Claims 1-42 are pending.

Election/Restriction

7. Restriction to one of the following inventions is required under 35 U.S.C. §121:
 - Group I- comprising Claims 2-8 drawn to a method to make ethanol from plants, or corn beer, classified under Class 426, Subclass 11, for example

-
- Group II- comprising Claim 9 drawn to a method to make ethanol via reducing the plant material with particle emulsion technology, classified under Class 435, Subclass 69.9, for example.
 - Group III – comprising Claim 10 drawn to a method to make ethanol via simultaneous enzymatic saccharification of substrate and fermentation, classified under Class 435, Subclass 72, for example.
 - Group IV – comprising Claims 11-19, 21-22, 24-28 and 31-36 drawn to a method to make ethanol via reducing a plant material, subsequent enzymatic saccharification followed by fermentation or simultaneous enzymatic saccharification and fermentation of said reduced plant material in temperature range of 25°C-40°C and pH range of 3-6.0 and further, reducing the temperature during fermentation, classified under Class 426, Subclass 20, for example.
 - Group V – comprising Claim 20 drawn to a method to make ethanol via enzymatic saccharification of substrate and fermentation of saccharified substrate, wherein solid content is decreased from about 40% to about 15% during said saccharification and fermentation of substrate, classified under Class 435, Subclass 68.1, for example.
 - Group VI – Comprising Claim 23 drawn to a method of simultaneous saccharification and fermentation or stepwise saccharification followed by fermentation steps of the substrate with backset addition, classified under Class 435, Subclass 162, for example
 - Group VII – Comprising Claims 29-30, drawn to a method to simultaneous saccharification and fermentation or stepwise substrate saccharification followed by resulting product fermentation steps to produce greater than 18% volume ethanol, classified under Class 426, Subclass 62, for example
 - Group VIII – Comprising Claims 37-38, drawn to a method to dried by-products recovery from the fermentation steps, classified under Class 426, Subclass 14, for example

-
- Group IX – Comprising Claims 39, drawn a method to simultaneous saccharification and fermentation or stepwise substrate saccharification followed by resulting product fermentation steps to produce ethanol and subsequently drying the co-product with an art-known additional step to dry the co-products with any one of Markush group labeled materials, classified under Class 435, Subclass 161, for example.
 - Group X – Comprising Claims 40-41, drawn to a composition resulting as by-product from ethanol fermentation of reduced plant materials, classified under Class 435, Subclass 163, for example
 - Group XI – Comprising Claim 42, drawn to a corn beer, classified under Class 426, Subclass 29, for example.

Linking Claims

8. Claim 1 links inventions I-VII. The restriction requirement between the linked inventions is subject to the non-allowance of the linking claims, identified above. Upon the allowance of the linking claims, the restriction requirement as to the linked inventions shall be withdrawn and any claims depending from or otherwise including all the limitations of the allowable linking claims will be entitled to examination in the instant application. Applicants are advised that if any such claims depending from or including all the limitations of the allowable linking claims are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. §121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131- 32 (CCPA 1971). See also MPEP §804.01.

Inventions are Independent and Distinct

9. The inventions are distinct, each from the other because of the following reasons:

Inventions in Groups I-IX are unrelated to each other because they are directed to different inventions that are not connected in design, operation/ contents and/or effect. These inventions are independent since they are not disclosed as capable of use together. They have different modes of operation, they have different functions, and/or they have different effects.

One would not have to practice the various methods at the same time to practice just one method alone (MPEP § 806.04, MPEP § 808.01). In the instant case, for example invention recited in claims encompassed in Group I are directed to a method having steps that are not the same as for e.g., for the invention in Group VIII invention, and would therefore, may not be practiced together.

Inventions in Groups X-XI are related to inventions in Groups I-IX as product and process to make the product. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the method to prepare ethanol is also applicable to a variety of processes for e.g., fermented foods. Similarly, said composition may also be prepared by ethanolic fermentation where a reduced, enzymatically saccharified plant material is not applicable for the production of "Distiller's dried grains (e.g., yeast fermentation for bread leavening).

The inventions discussed above are independent and distinct, each from the other. They have acquired a separate status in the art as a separate subject for inventive effect and require independent searches. The search for each one of the above inventions is not coextensive, particularly with regard to the literature search. For example the search strategy for simultaneous enzymatic saccharification of reduced plant materials and fermentation of said reduced, saccharified plant materials in to ethanol followed by recovery of distiller's grains and solids will require different key words than the search strategy for stepwise saccharification of reduced plant materials and fermentation of said reduced, saccharified plant materials. Similarly, fermentation of corn into corn beer will have different search strategy than the fermentation of reduced plant materials in to ethanol. Further, a reference that would anticipate the invention of one group would not necessarily anticipate or even make obvious another group. Finally, the consideration for patentability is different in each case. Thus, it would be an undue burden to examine all of the above inventions in one application. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification (Class and subclass), and their recognized diverse subject matter, restriction for examination purposes as indicated is proper.

10. Applicants are advised that a reply to this requirement must include an identification of an invention elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicants will be entitled to consideration of additional claims which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR §1.141. Currently, Claims 1, and each of the Claims 37 and 39-42 are generic claims. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

11. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR §1.48(b). Any amendment of inventorship must be accompanied by a petition under 37 CFR §1.48(b) and by the fee required under 37 CFR §1.17(l).

12. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR §1.116; amendments submitted after allowance are governed by 37 CFR §1.312.


In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR §1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. §101, §102, §103, and §112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. §121 does not


apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP §804.01.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kailash C. Srivastava whose telephone number is (571) 272-0923. The examiner can normally be reached on Monday to Thursday from 7:30 A.M. to 6:00 P.M. (Eastern Standard or Daylight Savings Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Terry McKelvey, can be reached on (571)-272-0775 Monday through Friday 8:30 A.M. to 5:00 P.M. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding may be obtained from the Patent Application Information Retrieval (i.e., PAIR) system. Status information for the published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (i.e., EBC) at: (866)-217-9197 (toll-free). Alternatively, status inquiries should be directed to the receptionist whose telephone number is (703) 308-0196.


Kailash C. Srivastava, Ph.D.
Patent Examiner
Art Unit 1655
(571) 272-0923


RALPH GITOMER
PRIMARY EXAMINER
GROUP 1200

May 22, 2006